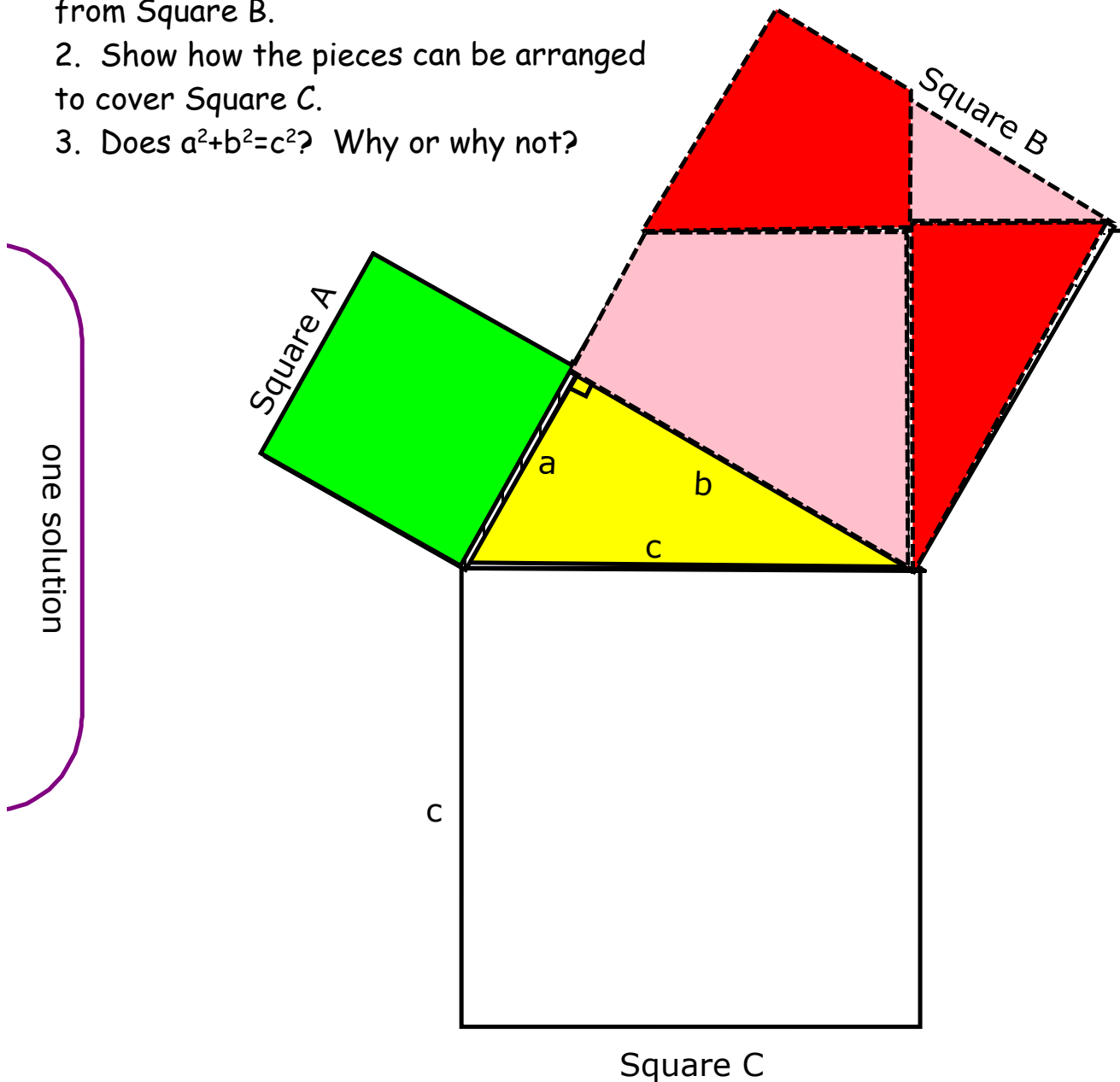


## Pythagorean Puzzle #1

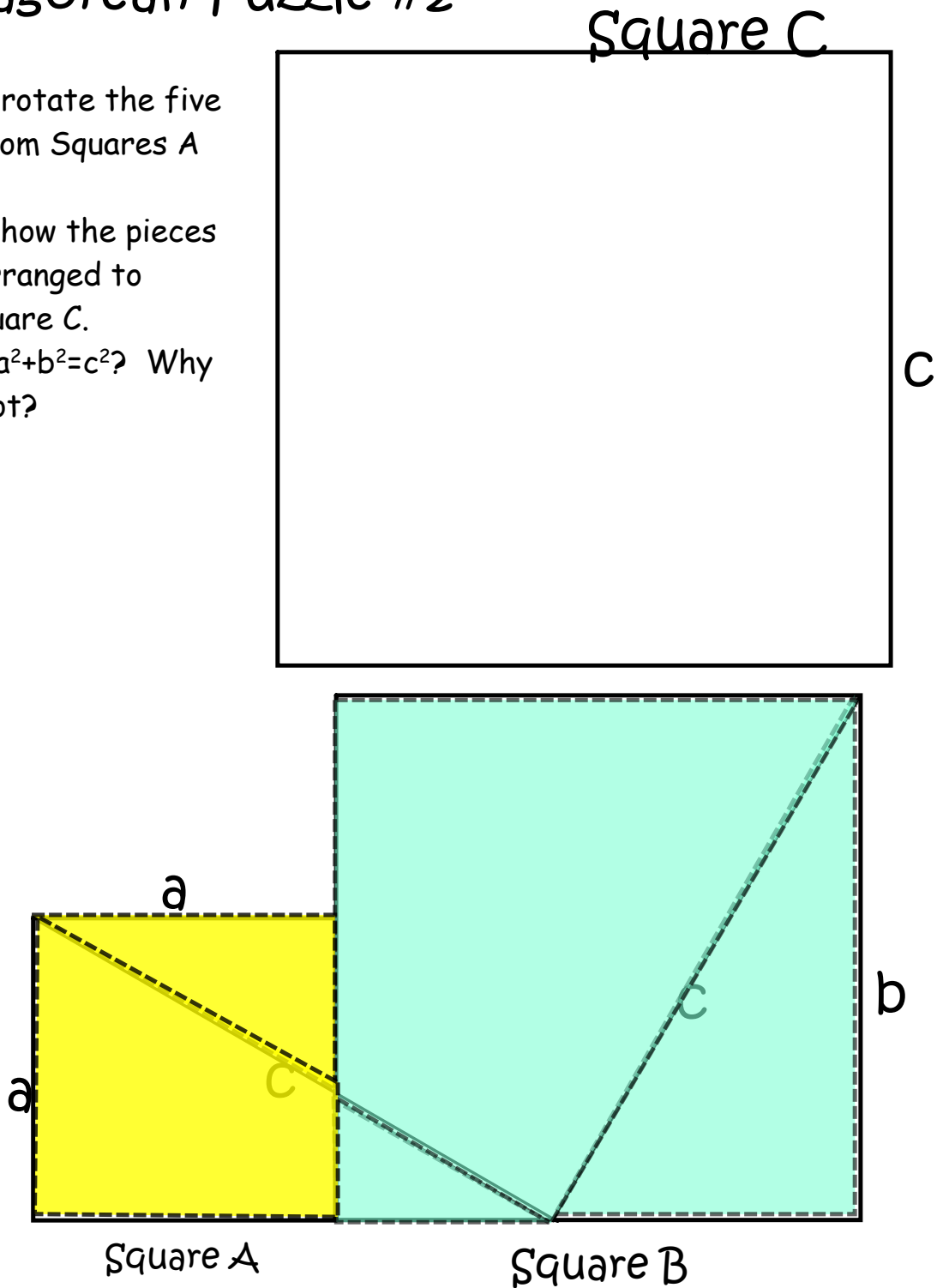
1. Move/rotate Square A and four pieces from Square B.
2. Show how the pieces can be arranged to cover Square C.
3. Does  $a^2 + b^2 = c^2$ ? Why or why not?



## Pythagorean Puzzle #2

1. Move/rotate the five pieces from Squares A and B.
2. Show how the pieces can be arranged to cover square C.
3. Does  $a^2 + b^2 = c^2$ ? Why or why not?

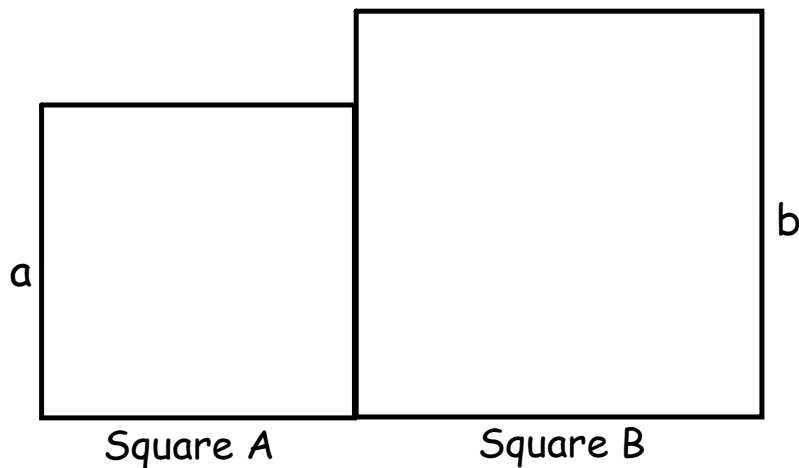
one solution



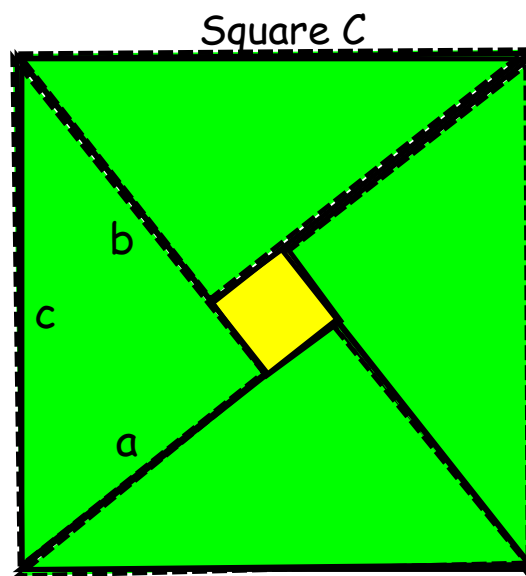


## Pythagorean Puzzle #3

1. Move/rotate the pieces from Square C.
2. Show how the pieces can be arranged to cover Squares A and B.
3. Does  $a^2 + b^2 = c^2$ ? Why or why not?

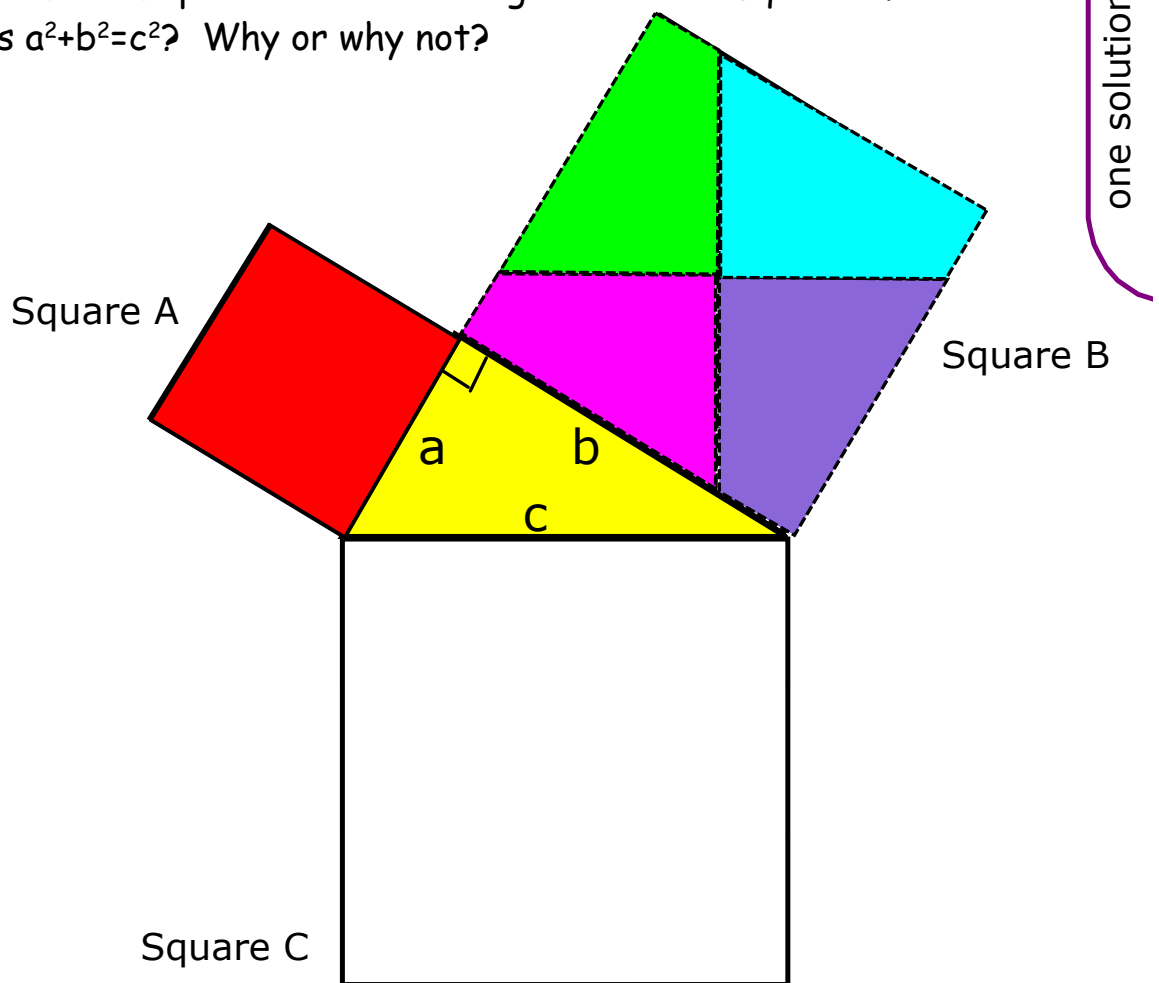


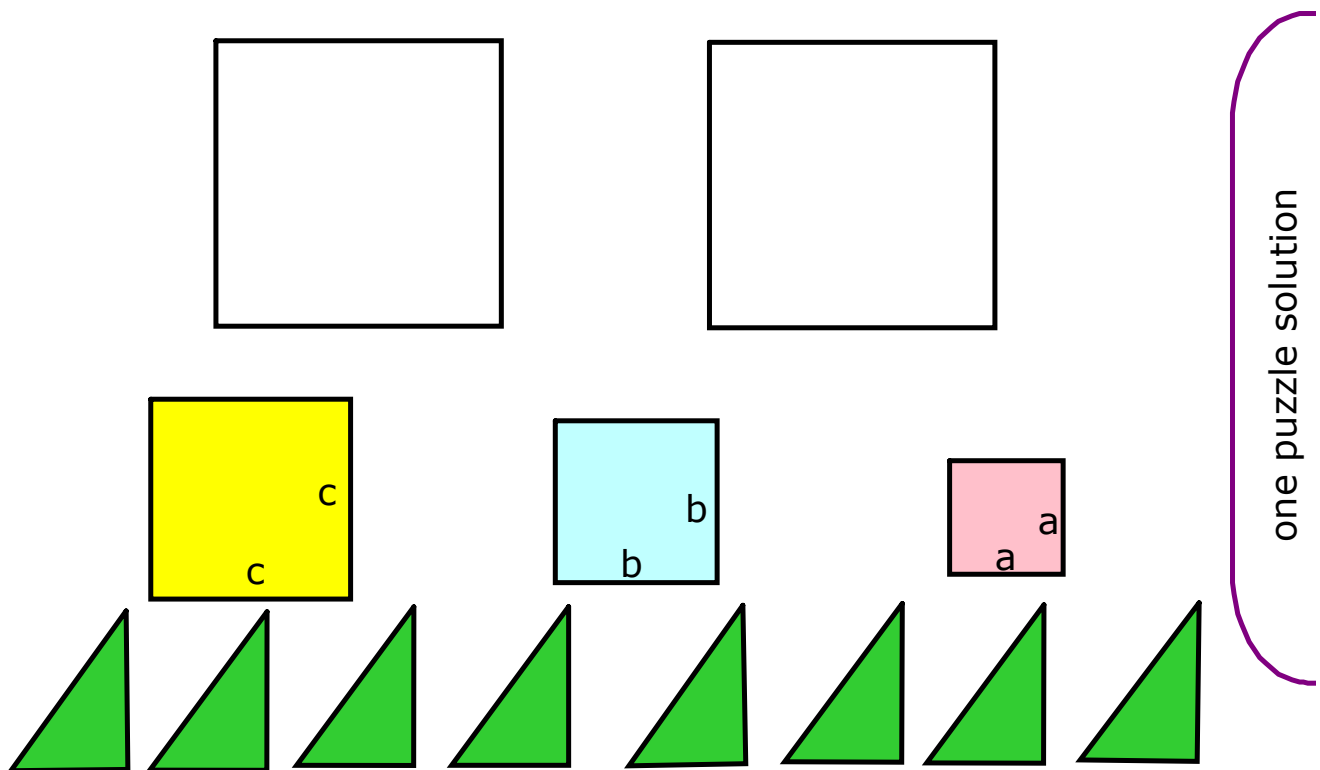
one solution



## Pythagorean Puzzle #4

1. Move/rotate Square A and four pieces from Square B.
2. Show how the pieces can be arranged to cover Square C.
3. Does  $a^2 + b^2 = c^2$ ? Why or why not?

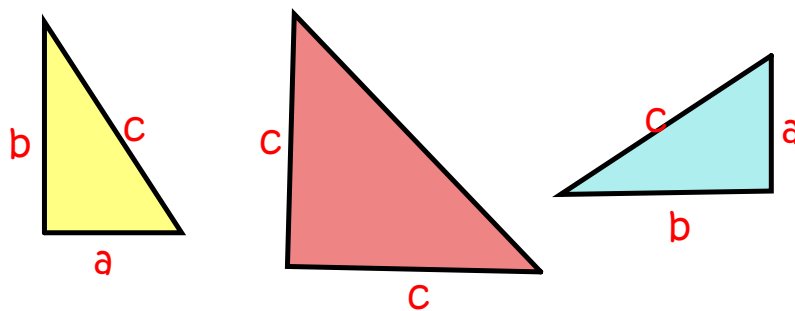




### Pythagorean Puzzle #5

1. Explore a green triangle. What can you discover about it?
2. What can you say about the two squares at the top of the page?
3. Given 8 triangles, a large square, medium square and small square, take these pieces and fill the two puzzle squares at the top.
4. Remove congruent pieces from each puzzle frame - 1 from the square on the left, then one from the right square until all of the congruent pieces have been removed. What can you say about the areas of the remaining pieces?

## #6 - President Garfield's Proof



1. President Garfield was able to prove the Pythagorean Theorem by rearranging the triangles shown to make a trapezoid. Rearrange them to make a trapezoid.
2. Find the area of the trapezoid you created.
3. Find the sum of the areas of the three triangles.
4. Since the area of the trapezoid is the same as the sum of the areas of the triangles, create an equation showing this and show how President Garfield proved the Pythagorean Theorem.

Hint #1

Hint #2

Hint #3

Hint #4

Answer

Attachments

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6PythagoreanPuzzleProofs.pdf